



March 17th, 2021

St. Croix County
Approval

Tom Zwald
Bomaz Farms
426 165 St
Hammond, WI 54015

SUBJECT: Amended Conditional Approval of Bomaz Farms Nutrient Management Plan, WPDES
Permit No. 0064505-03-0

Dear Mr. Bomaz:

After completing a review of Bomaz Farms 2020-2024 Nutrient Management Plan (NMP) the Wisconsin Department of Natural Resources (Department) is providing conditional approval that it is consistent with s. NR 243.14, Wis. Adm. Code. This part of your WPDES permit application is now ready for the public notice and comment process as required by Ch. 283 Stats.

Before applying manure onto approved fields each season, the Department recommends Bomaz Farms review the NMP with those individuals involved with manure applications to ensure all remain familiar with the approved manure spreading protocol, spreading maps, field and map verification, record keeping requirements, and all the conditions of this approval. Specifically, some fields in Bomaz Farms may have:

- Soils that may have bedrock or groundwater within 24 inches of surface,
- Multiple setback areas due to streams, conduits to streams, grassed waterways, wetlands or wells, and
- Evidence of possible soil erosion/flow channels. Note: road ditches or other man-made channels may be considered flow channels or conduits to navigable water and may be subject to a SWQMA and setback.

Reviewing the NMP and checking fields for these features and soil conditions prior to manure applications will help Bomaz Farms maintain compliance with their WPDES permit and Ch. NR 243 requirements.

FINDINGS OF FACT

The Department confirms that:

1. A current dairy herd size of 1,745 animal units (800 milking & dry cows, 700 heifers, and 150 calves). A planned herd size of 2,905 animal units (1,600 milking & dry cows, 700 heifers, and 350 calves) in 2021.
2. Manure generation and spreading records indicate your herd will annually generate approximately 13,598,438 gallons of manure and process wastewater and 2,991 tons of solid manure in the first year of the permit term. At full expansion 27,338,251 gallons of manure and process wastewater and 3,164 tons of solid manure will be generated in 2021.
3. The use of application restriction options 1 and 5 within surface water quality management areas.
4. The use of phosphorus delivery method P Index.

5. That Bomaz Farms currently has 3,153 acres (950.7 owned and 2,202.3 controlled through contracts, rental agreements or leases, or under manure agreements) of which 3,099.8 are spreadable acres.
6. That no fields are directly adjacent to or have high potential to deliver nutrients and sediment to a 303(d) impaired water.
7. That some fields included in the NMP are directly adjacent to or have high potential to deliver nutrients and sediment to outstanding/exceptional waters including the Rush and Kinnickinnic Rivers.
8. That Bomaz Farms currently has at least 484 days of storage for liquid manure, process wastewater and rainfall and at least 59 days of storage for solid manure.

	<i>Total Volume</i>	<i>Maximum Operating Level (MOL) Volume</i>
WSF 1	3,591,806 gal	2,756,987 gal
WSF 2	11,180,221 gal	9,805,398 gal
WSF 3	25,110,672 gal	21,893,994 gal

9. That 41 fields are tiled.

<ul style="list-style-type: none"> - Afdahl7 - Afdahl10 - Austrums North - F1 North - Freeman 2 - Home 2 - Home20 - Home23 - Home24 - Home27 - J1 - RoekersWest - S11 - Whalan-W6 	<ul style="list-style-type: none"> - Afdahl8 - Afdahl11 - Austrums South - Fairmount South - Hages - Home 3 - Home21 - Home24 - Home25 - Home100 - J2 - S4 - Webb - Whalan-W7 	<ul style="list-style-type: none"> - Afdahl9 - Afdahl12 - Bergs-B1 - Freeman 1 - Home 1 - Home 4 - Home22 - Home25 - Home26 - Hub 8 - J4 - S9 - Whalan-W5
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10. That all fields will be checked for the following features prior to/during manure or process wastewater applications: soil areas with possible shallow groundwater (i.e., within 24 inches of surface) at the time of manure application; required setbacks associated with wells, navigable waters, conduits to navigable waters, grassed waterways, wetlands, possible soil erosion/flow channels.
11. That surface applications of manure will not be completed when precipitation capable of producing runoff is forecasted within 24 hours of the time of planned application.

CONDITIONAL NUTRIENT MANAGEMENT PLAN APPROVAL

The Department hereby approves the 2020-2024 Bomaz Farms Nutrient Management Plan subject to the following conditions and the applicable requirements of Ch. NR 243, Wis. Adm. Code:

FIELD AND MANURE MANAGEMENT

1. Fields not included in the NMP and new fields shall not receive manure or process wastewater applications until they have been properly soil sampled, entered into Snap Plus, evaluated for their nutrient needs, and approved by the Department.
2. The following fields are prohibited from receiving applications of manure or process wastewater:

<ul style="list-style-type: none"> - Afdahl1 (default soil test) 	<ul style="list-style-type: none"> - Afdahl11 (default soil test) 	<ul style="list-style-type: none"> - Afdahl10 (default soil test)
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|---------------------------------|---------------------------------|--------------------------------|
| - Afdahl12 (default soil test) | - Afdahl2 (default soil test) | - Afdahl20 (default soil test) |
| - Afdahl21 (default soil test) | - Afdahl22 (default soil test) | - Afdahl23 (default soil test) |
| - Afdahl24 (default soil test) | - Afdahl25 (default soil test) | - Afdahl26 (default soil test) |
| - Afdahl27 (default soil test) | - Afdahl3 (default soil test) | - Afdahl30 (default soil test) |
| - Afdahl31 (default soil test) | - Afdahl32 (default soil test) | - Afdahl33 (default soil test) |
| - Afdahl4 (default soil test) | - Afdahl40 (default soil test) | - Afdahl41 (default soil test) |
| - Afdahl42 (default soil test) | - Afdahl5 (default soil test) | - Afdahl6 (default soil test) |
| - Afdahl7 (default soil test) | - Afdahl8 (default soil test) | - Afdahl9 (default soil test) |
| - Claycombs (default soil test) | - Halvorson (default soil test) | - O10 (default soil test) |

If Bomaz Farms wishes to use these fields for applications of manure or process wastewater all necessary information shall be submitted to the Department prior to application to demonstrate compliance with NR 243 and other applicable codes. Written Department approval amending this condition approval must be received prior to application.

3. If existing fields yield a soil test results greater than 200 ppm P, those fields would be prohibited from receiving manure or process wastewater applications, unless you obtain Department approval in accordance with NR 243.14(5)(b)2., Wis. Adm. Code.
4. All liquid manure samples collected may be analyzed, at a minimum, for percent dry matter, total nitrogen, percent $\text{NH}_4\text{-N}$, percent $\text{NO}_3\text{-N}$, phosphorus, potassium, and sulfur.
5. If manure sample results have a dry matter (DM) content less than 2.0% and the percent ammonium (NH_4^+) is greater than 75% of the total N, Bomaz Farms may use the following equation to adjust the first year available nitrogen when applications are injected or incorporated within 1 hour:

$$\text{First-Year Available N} = \text{NH}_4\text{-N} + [0.25 \times (\text{Total N} - \text{NH}_4\text{-N})]$$

6. Bomaz Farms shall record daily manure applications by using form 3200-123A. These forms shall be retained at the farm and provided to the department upon request.
7. Bomaz Farms shall annually submit a spreading report that summarizes the land application activities listed under NR 243.19(3)(c)5., Wis. Adm. Code by using form 3200-123.

WINTER SPREADING

8. Liquid manure applications during winter conditions, as defined by NR 243.14(7), Wis. Adm. Code, are prohibited with the exception of emergency applications.
9. The following field(s) are approved for winter spreading solid manure, emergency applications of liquid manure and frozen liquid manure:

- Austrums North	- Hages	- Hendricks
- Home102	- Home103	- Home5
- Home 8	- J4	- N1-Bucks
- O1	- O10	- O2
- O23	- O3	- O5
- S20	- S4	- S40
- S9	- Sp1	- Sp4
- Sp5	- Whalan-W2	- Whalan-W5
- WS16	- Afdahl1	- Afdahl10
- Afdahl11	- Afdahl12	- Afdahl2
- Afdahl20	- Afdahl21	- Afdahl22
- Afdahl23	- Afdahl24	- Afdahl25
- Afdahl26	- Afdahl27	- Afdahl3
- Afdahl30	- Afdahl31	- Afdahl33
- Afdahl4	- Afdahl40	- Afdahl41
- Affolter NE	- Affolter NW	- Affolter S
- Ammeter	- Austrums South	- Bergs-B1
- Bergs-B2	- Bergs-B3	- Claycombs
- F1 North	- Fairmont South	- Halvorson
- Ham1	- Ham2	- Ham3
- Home1	- Home100	- Home101
- Home13	- Home14	- Home2
- Home20	- Home21	- Home22
- Home29	- Home3	- Home6
- Home7	- Home8	- Home9
- J1	- J2	- J3
- Lebo	- O11	- O20
- O21	- O22	- O24
- O4	- Pinkes P1 West (W)	- Pinkes P3 East (E)
- Roekers 1	- Roekers 2	- Roekers 3
- Roekers East	- Roekers West	- S10
- S2	- S30	- S32
- S33	- S34	- S37
- S6	- Solberg S1	- Sp2
- Sp3	- Webb	- Webber
- Whalan-W3(S)	- Whalan-W4	- Whalan-W6
- Whalan-W8		

10. The following field(s) are denied for winter spreading solid manure, emergency applications of liquid manure and frozen liquid manure:

- Freeman 1	- Freeman 2	- O12
- S11	- S12	- S3
- S5	- Whalan-W1	- Afdahl32
- Afdahl42	- Afdahl5	- Afdahl6
- Afdahl7	- Afdahl8	- Afdahl9
- Freeman 3	- Home104	- Home10a
- Home10b	- Home11	- Home12
- Home15	- Home16	- Home23
- Home24	- Home25	- Home26
- Home27	- Home28	- Home4

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|------------------|-------------|------|
| - O6 | - O7 | - S1 |
| - S31 | - S7 | - S8 |
| - Whalan-W3(S02) | - Whalan-W7 | |

11. Winter spreading of solid and liquid manure may not occur during the “high risk runoff period” pursuant to s. NR 243.14(6)(c) and NR 243.14(7)(c), respectively.
12. Winter applications of liquid manure shall only occur under emergency situations, after notifying the Department and receiving verbal approval.
13. Liquid applications shall be limited to 3,500 gallons per acre or 30 lbs. P per acre, whichever is less, on slopes 2-6% and 7,000 gallons per acre or 60 lbs. P per acre, whichever is less, on slopes 0-2%. Winter applications of solid manure shall be limited to 60 lbs. P per acre.

HEADLAND STACKING

14. The following headland stacking sites are approved for use in February and March only for 16-32% solids:

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|-------------|---------|----------|
| - Afdahl 41 | - Ham 1 | - Home 5 |
| - Home 2 | - O10 | |

15. The following headland stacking sites are rejected for use due to not meeting criteria within NRCS 313 for 16-32% solids:

- | | | |
|------------------|------------------|------------------|
| - Afdahl 3 | - Afdahl 31 | - Home 103 |
| - Home 102 | - Home 101 | - O24 |
| - O3 | - Home 13 | - Ham 2 |
| - Ham 3 | - W8 | - Roekers 3 |
| - Roekers West | - Roekers East | - Austrum South |
| - Bergs B3 | - Bergs B1 | - Bergs B2 |
| - F1 North | - Home 21 | - Home 22 |
| - Hendricks | - Home 6 | - Home 7 |
| - Home 3 | - J2 | - J4 |
| - O4 | - Pinkes P1 West | - Pinkes P3 East |
| - S9 | - S10 | - S30 |
| - S32 | - S34 | - S20 |
| - Solbergs S1 | - Sp2 | - Sp4 |
| - Webb | - W2 | - W3 |
| - W5 | - Hages | - W6 |
| - Fairmont South | - Affolter NW | - WS16 |
| - S4 | | |

MANURE & PROCESS WASTEWATER IRRIGATION

16. Irrigation of manure or process wastewater is prohibited.

SUBMITAL AND RECORDKEEPING REQUIREMENTS

17. A copy of this conditional approval shall be included in all future annual Nutrient Management Plan Updates in addition to the NR 243 and NRCS 590 checklists.

18. By March 31, 2020, the NMP must be updated and submitted to the department to include the agreed upon manure nutrient values after a dilution factor is considered. This dilution factor was accepted by the department and Bomaz Farms for planning purposes only. The NMP must then again be updated once actual manure nutrient analysis is taken according the Bomaz Farms' permit conditions.
19. By March 31, 2020, fields overlapping with other CAFO's must be either removed from one of the farms NMP's. Alternatively, evidence could be provided to show that both NMP's are accounting for all nutrients in the exact same way. It must also be shown that the crop rotations, tillage, applications, etc. are identical in both plans.

This conditional approval does not limit the Department's regulatory authority to require NMP revisions (based upon new information or manure irrigation research findings) or request additional information in order to confirm or ensure your farm operation remains in compliance with NR 243 and your WPDES permit conditions. If additional information, project changes or other circumstances indicate a possible need to modify this approval, the Department may ask you to provide further information relating to this activity.

Please keep in mind that approval by the Department of Natural Resources – Runoff Management Program does not relieve you of obligations to meet all other applicable federal, state or local permits, zoning and regulatory requirements.

If you have any questions regarding this approval I can be reached at 608-212-8460 or Ashley.Scheel@Wisconsin.gov.

Sincerely,



Ashley Scheel, CCA
WDNR Nutrient Management Plan Reviewer
Wisconsin Department of Natural Resources

cc: Jeff Jackson, WDNR Agricultural Runoff Management Specialist (Jeffrey.Jackson@Wisconsin.gov)
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